

REMARKS

Claims 1, 5, 6, 8-10, 12-19, 25 and 26 are currently pending in the subject application, and are presently under consideration. Claims 1, 5, 6, 8-10, 12-19, 25 and 26 are rejected. Claims 1, 5, 6, and 8-10 have been amended to correct formal matters. Claim 12 has been cancelled. Favorable reconsideration of the application is requested in view of the amendments and comments herein.

I. Objection to Claims 5, 6, and 8-10

Claims 5, 6, and 8-10 have been rejected as having a preamble inconsistent with their base claim. Each of the claims has been amended to recite “a transmitter system” as opposed to “a system.” It is respectively submitted that this amendment does not raise new issues and places the application in better condition for appeal, and it is thus respectfully requested that the amendment be entered. In view of this amendment, withdrawal of the objection of claims 5, 6, and 8-10 is respectfully requested.

II. Rejection of Claim 1 under 35 U.S.C. §112

Claim 1 has been rejected under 35 U.S.C. §112 ¶2 as failing to distinctly claim the subject matter regarded as the invention. Claim 1 has been amended as suggested by the Examiner to place the claim in compliance with 35 U.S.C. §112 ¶2. It is respectively submitted that this amendment does not raise new issues and places the application in better condition for appeal, and it is thus respectfully requested that the amendment be entered. In view of this amendment, withdrawal of the rejection of claim 1 is respectfully requested.

III. Rejection of Claims 1, 5, 6, 12, and 19 under 35 U.S.C. §103(a)

Claims 1, 5, 6, 10, and 19 have been rejected as unpatentable over U.S. Patent No. 6,549,067 to Kenington (hereinafter: Kenington) in view of U.S. Patent No. 5,564,097 to Swanke (hereinafter: Swanke). It is respectfully submitted that Swanke and Kenington, taken alone or in

combination, fail to teach or suggest a transmitter system that spreads a signal, converts the digital spread signal from a first domain to a second domain, upconverts the converted signal, despreads the upconverted signal, and transmits the despread signal, as recited in claims 1 and 19. The Office Action states that it would be obvious to modify Kenington based on Swanke to add a spreading and despread operation to suppress spurious signals. Reviewing Swanke, specifically FIG. 2 and the accompanying text (Specifically, Col.3, lines 6-9), it appears that the input signal is downconverted as part of the spreading operation (at the mixer 206). To the extent that one of skill in the art would be lead to modify Kenington in view of Swanke to suppress spurious signals, there would be no reason to for a skilled artisan to place a mixer for frequency conversion between the spreader and the despread described in Swanke, as the current configuration in Swanke would accomplish the stated motivation. Accordingly, one of skill in the art, attempting to incorporate the spreading and despread of Swanke into Kenington, would not be lead to incorporate a frequency conversion step that acts upon an already spread signal, as recited in claims 1 and 19, as there is simply no reason, absent the teachings of the subject application, to modify Kenington in view of Swanke in this manner. It is thus respectfully submitted that the combination of spreading a signal, frequency converting the spread signal, despread the frequency converted signal, and transmitting the despread signal would not be obvious to one skilled in the art in view of Kenington and Swanke.

Claims 5, 6, and 10 each depend, directly or indirectly, from claim 1, and are allowable for at least the same reasons. Accordingly, claims 1, 5, 6, 10, 12, and 19 should be patentable over the Swanke, Tulino, and Lampe, and withdrawal of this rejection is respectfully requested.

IV. Rejection of Claim 8 under 35 U.S.C. §103(a)

Claim 8 has been rejected as unpatentable over Kenington and Swanke in further view of U.S. Patent No. 7,099,402 to Mollenkopf (hereinafter: "Mollenkopf"). Claim 8 depends from claim 1, and is allowable for at least the same reasons. Mollenkopf does not remedy the deficiencies of Kenington and Swanke with respect to claim 1 as described above. It is thus

respectfully submitted that claim 8 defines over the cited art, and the withdrawal of this rejection is respectfully submitted.

V. Rejection of Claims 9 and 25 under 35 U.S.C. §103(a)

Claims 9 and 25 has been rejected as unpatentable over Kenington and Swanke in further view of U.S. Patent No. 5,751,705 to Sato (hereinafter: "Sato"). Claims 9 and 25 depend from claims 1 and 19 respectively, and are allowable for at least the same reasons. Sato does not remedy the deficiencies of Kenington and Swanke with respect to claims 1 and 19 as described above. It is thus respectfully submitted that claims 9 and 25 define over the cited art, and the withdrawal of this rejection is respectfully submitted.

VI. Rejection of Claims 13-16 and 26 under 35 U.S.C. §103(a)

Claims 13-16, 25, and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Swanke and Tulino in further view of U.S. Publication No. 2002/0160732 to Panasik, et al. ("Panasik"). It is respectfully submitted that one skilled in the art would not be lead to incorporate the clipping mechanism of Panasik into the proposed combination of Swanke and Tulino absent the teachings of the subject application.

Claim 13 recites a signal conversion system. A spreading code generator produces a direct sequence spread spectrum (DS-SS) spreading code. A spreading circuit receives an input signal and combines the input signal with the DS-SS spreading code to provide a spread input signal. A clipping component reduces peaks associated with the spread input signal. A despreading circuit despreads the peak reduced spread input signal. Claim 26 recites at least the limitations of claim 13, in means plus function form.

The most recent Office Action notes that Swanke in view of Tulino fails to teach the recited clipping component, and relies on Panasik to provide a clipping component implemented upstream of an analog-to-digital converter. The rationale for this combination has been changed yet again, however, to the assertion that one skilled in the art would be motivated to include the

clipping component to ensure that the signal stays within a predefined range associated with the ADC.

It is respectfully submitted, however, that one skilled in the art would not seek to utilize the clipping component taught in Panasik in a system such as that provided by the proposed combination of Swanke and Tulino. The purpose of the clipping component in Panasik is to eliminate instability caused by overload of a higher order sigma-delta ADC. (See Panasik ¶0006). Swanke in view of Tulino would not suffer from this problem, and there would be no reason for one of skill in the art to introduce the Panasik clipping component. As Applicant's representative understands the components involved, a signal exceeding the dynamic range of a conventional ADC gives the same result as a signal clipped to a fixed maximum value of the ADC, as taught in Panasik. There would thus be no reason to incorporate an extraneous clipping mechanism into Swanke and Tulino, as it would have essentially no effect but to consume space and power. To the extent that the Examiner is arguing for an incorporation of the sigma-delta ADC into Swanke in view of Tulino, applicant stands by the arguments presented in the Amendment mailed that the use of a sigma-delta ADC would be redundant, and there would be no rational purpose for one of skill in the art to modify Swanke in view of Tulino to include the sigma-delta ADC. It is thus respectfully submitted that claims 13 and 26 define patentable invention over the cited art.

Claims 14-16 depend from claim 13 and should be allowable for at least the same reasons. It is thus respectfully submitted that claims 13-16 and 26 define over the cited art, and the withdrawal of this rejection is respectfully submitted.

VI Rejection of Claim 17 under 35 U.S.C. §103(a)

Claim 17 has been rejected as unpatentable over Swanke, Tulino, and Panasik in further view of U.S. Patent No. 6,873,281 to Esterberg et al. ("Esterberg. Claim 17 depends, indirectly, from claim 13, and is allowable for at least the same reasons. Esterberg does not remedy the deficiencies of either the proposed combination of Swanke, Tulino, and Panasik with respect to

claim 13, as described above. It is thus respectfully submitted that claim 17 defines over the cited art, and the withdrawal of this rejection is respectfully submitted.

VII Rejection of Claim 18 under 35 U.S.C. §103(a)

Claim 18 has been rejected as unpatentable over Swanke, Tulino, and Panasik in further view of Lampe. Claim 18 depends, indirectly, from claim 13, and is allowable for at least the same reasons. Lampe does not remedy the deficiencies of Swanke, Tulino, and Panasik with respect to claim 13, as described above. It is thus respectfully submitted that claim 18 defines over the cited art, and the withdrawal of this rejection is respectfully submitted.

CONCLUSION

In view of the foregoing remarks, Applicants respectfully submit that the present application is in condition for allowance. Applicants respectfully request reconsideration of this application and that the application be passed to issue.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

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